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FOREWORD

This revised ***Property Inspection Guide, 2000 version***, contains standards and practices to minimize the loss of life and property from wildfire. It was developed to provide the necessary information and procedures required to establish and maintain a system to ensure fire safe compliance by homeowners in the Urban-Wildland Interface.

This Guide is designed for use by fire prevention inspectors or persons with responsibility to conduct inspections of structures and improvements in fire prone areas. It is a ready reference that provides legal responsibilities and recommendations on additional fire safe practices.

This Guide was developed as a cooperative effort by the University of California and the Interagency Engineering Working Group comprised of representatives from the United States Forest Service (**USFS**), Bureau of Land Management (**BLM**), California Department of Forestry and Fire Protection (**CDF**), and other interested individuals.

Special thanks should be given to the following individuals for their assistance:

- Al Anderson, University of California Forest Products Laboratory
- Paul Bertagna, Battalion Chief, CDF Shasta-Trinity Ranger Unit
- Melissa Frago, Research and Writing Consultant, University of California Forest Products Laboratory
- Robert Irby, Deputy Chief, CDF/Office of the State Fire Marshal, Fire Engineering
- Sue McCourt, Fire Prevention Specialist, USFS, Beckwourth Ranger District
- Bernie Paul, Battalion Chief, CDF Siskiyou Ranger Unit
- Carol L. Rice, President, Wildland Resource Management Inc.
- Jeannie Smith, Deputy State Fire Marshal, CDF/Office of the State Fire Marshal, Fire Engineering
- Frank Steele, Battalion Chief, CDF Lassen-Modoc Ranger Unit
- Doug Wamack, President, Web Stunts 'N Stuff Inc.
- Mike Weger, Fire Captain Specialist, CDF Tulare Ranger Unit

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1. INTRODUCTION

Public Resources Code (PRC) Section 4291 – "Clearance Around Structures" states:

> *"Any person that owns, leases, controls, operates, or maintains any building or structure in, upon, or adjoining any mountainous area of forest-covered lands, brush-covered lands, or grass-covered lands, or any land which is covered with flammable material, shall at all times do all the following:*
>
> *(a) Maintain around and adjacent to such building or structure, a fire break made by removing and clearing away, for a distance of not less than 30 feet on each side thereof or to the property line, whichever is nearer, all flammable vegetation or other combustible growth. This subdivision does not apply to single specimens of trees, ornamental shrubbery, or similar plants which are used as ground cover, if they do not form a means of rapidly transmitting fire from the native growth to any building or structure.*
> *(b) Maintain around and adjacent to any such building or structure, additional fire protection or fire break made by removing all brush, flammable vegetation, or combustible growth which is located from 30 feet to 100 feet from such building or structure or to the property line, whichever is nearer, as may be required by the director if he finds that, because of extra hazardous conditions, a fuel break of only 30 feet from such building or structure is not sufficient to provide reasonable fire and life safety. Grass and other vegetation located more than 30 feet and less than 18 inches in height above the ground may be maintained where necessary to stabilize the soil and prevent erosion.*
> *(c) Remove that portion of any tree which extends within 10 feet of the outlet of any chimney or stovepipe.*
> *(d) Maintain any tree adjacent to or overhanging any building free of dead or dying wood.*
> *(e) Maintain the roof of any structure free of leaves, needles, or other dead vegetative growth.*
> *(f) Provide and maintain at all times a screen over the outlet of every chimney or stovepipe that is attached to any fireplace, stove, or other device that burns any solid or liquid fuel. The screen shall be constructed of nonflammable material with openings of not more than one-half inch in size.*
> *(g) The director may adopt regulations exempting structures with exteriors constructed entirely of nonflammable materials, or conditioned upon the contents and composition of same, he may vary the requirements respecting the removing or clearing away of flammable vegetation or other combustible growth with respect to the area surrounding said structures.*
>
> *No such exemption or variance shall apply unless and until the occupant thereof, files with the department, in such form as the director shall prescribe a written consent to the inspection of the interior and contents of such structure to ascertain whether the provisions hereof and the regulations adopted hereunder are complied with at all times."*

This law was enacted to prevent fire that originates in structures or on premises to spread into forested areas. It was also created to minimize the chances of a forest fire entering into populated areas and destroying improved property and endangering human life. The history of damaging fires has shown the most devastating danger is the risk of fire originating in the wildland and transmitting itself into improved areas. Most statutory hazard reduction requirements and other hazard reduction measures are based upon this concept. However, the risk of wildfire originating on or about structures and their premises is great, and also causes historically damaging fires. The statutory hazard reduction requirements, and other hazard and risk measures, also mitigate the occurrence of structure and premise wildfire ignitions. PRC 4291 does not apply to a specific jurisdiction, but does apply to specific fuel conditions which are identified in the opening paragraph.

2. PROPERTY FIRE PREVENTION INSPECTIONS

2.1 Fire Prevention Inspections

The goal of the fire prevention program is to educate homeowners of measures to prevent the ignition and spread of unwanted human-caused fires. Emphasis should be placed on loss reduction and prevention of large and damaging fires and to provide firefighter safety. One of the necessary tools utilized to accomplish this goal is the **structural fire prevention** inspection. Inspections are a fire prevention engineering activity. Coordinated with other ignition management activities, the inspections are aimed at eliminating or reducing fire hazards and risks by changing the environment through removing or reducing the heat source, modifying or reducing the fuels, and modifying the act or omission, allowing the heat source to contact the ignitable fuels.

2.2 Authority

Authority for California's fire protection agencies to enforce state forest and fire laws is contained in **PRC 4119**. Agency personnel may inspect all properties, except the interior of dwellings, subject to the state forest and fire laws, for the purpose of ascertaining compliance with such laws. USFS personnel that are allowed to do routine inspections for the reduction of fire hazards around buildings as described under PRC 4291 must be designed, in writing, by the Director of CDF. This designation allows certain Forest Service employees to act as an authorized agent for CDF to do routine fire inspections as specified in the Four-Party Cooperative Fire Protection Agreement. If a violation of state law is found, Forest Service employees should contact their local CDF office and Forest Service Law Enforcement Officer.

2.3 Guidelines

Success depends on all personnel, including fire prevention, fire control, and resource management staff. All contacts should be handled so citizens will understand and participate in fire prevention efforts. Citizen participation will lead to reductions in total wildfire costs and losses. To the extent resources are available, local inspection programs should concentrate on areas that have the greatest potential for large and damaging fires with the accompanying loss of life and property.

All personnel involved in inspection activities should have a badge, name plate, and the proper shoulder patch to facilitate proper identification. Unit fire prevention plans should contain local inspection policy and procedures, including minimum training requirements for fire prevention inspectors.

All inspections conducted for the purpose of ascertaining compliance with state forest and fire laws will be recorded on the Interagency Fire Hazard Inspection Notice (LE-38a [USFS R5-5100-209] – **Appendix B**) to provide for: uniform law enforcement, a record for timely follow-up, public education, standardized written notice, and documentation of inspection activity level for program effectiveness and direction.

2.4 Liability

If fire law violations are observed, or significant hazards or risks are evident, the violations should be recorded on an appropriate inspection form. Corrective information, such as handout material, should be provided to the occupant to facilitate correction and compliance.

The occupants should understand that they are responsible for any fire that escapes their control or property. Explain that if a fire should start on their property, because of certain hazards, and spread to a neighbor's property, the neighbor may have civil recourse for damages through the courts. In addition, the wildland fire agency may recover suppression costs and the occupants may face criminal charges.

2.5 Interior Structure Inspection

CDF, USFS, and BLM may not inspect the interior of a structure unless specifically authorized under PRC 4291. Local fire agencies may have the authority and should be encouraged to inspect single-family structure interiors upon request.

2.6 Mechanical Equipment

If mechanical equipment is present, follow the suggested inspection procedures and state law requirements found in the Interagency ***"Industrial Operations Fire Prevention Field Guide."***

3. INSPECTOR QUALIFICATIONS

Below are some qualities of a good fire prevention inspector. Of primary importance is personal appearance. The inspector should:

- ✓ Be neat.
- ✓ Be in proper uniform.
- ✓ Be well mannered.
- ✓ Be dependable.
- ✓ Have the ability to spot unusual or dangerous conditions, and foresee the creation of dangerous situations.
- ✓ Be able to size-up people quickly and correctly.
- ✓ Have personal initiative, be able to plan assignments and carry out work without direct supervision.
- ✓ Have a keen interest in the job and a sense of responsibility toward the public.
- ✓ Possess self-confidence - be firm, fair and friendly.
- ✓ Be alert to new ideas.
- ✓ Become familiar with agency policies.
- ✓ Be tactful in pointing out hazards and criticizing situations.
- ✓ Have the fortitude and perseverance to see the job through.
- ✓ Know the forest and fire laws thoroughly**.**
- ✓ Know the inspection area.

Inspectors must keep three things in mind. They:

1. Must use their abilities to size-up conditions or operations where a probable fire may result from hazards and risks coming together.
2. Are reducing fire occurrence by obtaining compliance with the law.
3. Are providing a valuable service to the public by informing and educating them in techniques to protect themselves and their property from wildland fires.

3.1 Tools of the Inspector

Below are tools and materials that will help the inspector do a thorough inspection.

- ❑ A map of the area to be inspected; with all known buildings identified.
- ❑ Inspection forms and notebook. Notes should be taken of observed hazards and risks during tour of inspection. Sketches, photos, or maps may also be an aid to future inspections or firefighting operations.
- ❑ Red Tags, spark arrester stickers, and other notification systems.
- ❑ Flashlight – which may assist in checking for certain hazards.
- ❑ Spark Arrester Guide.
- ❑ Copy of applicable laws and ordinances.
- ❑ Camera – Photographs of violations where compliance is not expected are desirable both for possible legal action and for information and education purposes.
- ❑ Prior records where previous inspections have been made should be studied before additional inspections are made.
- ❑ Measuring tape to determine adequate clearances, etc.

All inspections should end with providing the homeowner with a handout relating to firewise practices for future reference.

4. INSPECTOR TRAINING

Unit fire prevention plans should list the minimum training required for new fire inspectors. The minimums for inspectors conducting property inspections in the state responsibility area (SRA) should include at least:

1. Orientation
   a. Property Inspection Guide
   b. Local/regional/agency policy

2. Minimum Qualifications
   a. Local requirements

3. Forest and Fire Laws
   a. Excerpts from State and Federal Laws (**Appendix C**)
   b. Detailed instruction on clearance requirements

4. Local Regulations
   a. Air Pollution Control District (APCD) references
   b. Unit burn permit requirements
   c. Weed abatement ordinances

5. Fuel Management Techniques for Homeowners
   a. Available educational handouts for distribution.

6. Property Inspections
   a. Defensible Space Concept
   b. Fuel Management for Homeowners
   c. Access for Emergency Equipment
   d. Vegetation Management
   e. Firewise Construction
   f. Fire Sources
   g. Emergency Preparedness

7. Documenting the Inspection
   a. Legal requirement
   b. State, regional, local requirements
   c. Interagency Fire Hazard Inspection Notice (LE 38a – **Appendix B**)

8. Follow-Up Inspections

5. PRE-INSPECTION PROGRAM

A pre-inspection program can improve compliance, foster good public relations with homeowners, reduce law enforcement action and reduce overall staffing and cost requirements. Pre-inspection activities include media notification of potential inspectees, mail-out information, homeowner self-inspection mail-outs and homeowner confirmation of compliance with codes. Consider the following:

- Time of year (emphasize usually during spring months).
- Large numbers of absentee ownership, i.e., summer homes.
- Limited availability of staff, including fire crews.
- Adds emphasis to high and critical fire hazard severity areas.

5.1 Advance Notice

Advance notice (letters/postcards and media messages) used in combination with inspections produces the most effective results for the amount of time and work invested. The advance notice (letter/postcard) should contain the following:

- The necessity of fire hazard reduction.
- Notice that the department will be contacting the property holder to make a fire prevention inspection and the approximate date.
- What the inspection will consist of.
- The measures necessary for the owner to complete in order to adequately reduce the fire hazards. This can be keyed to an enclosed Fire Law Excerpts pamphlet or other attachment.
- Agency contact, address and phone number for more information.

6. CONDUCTING THE INSPECTION

6.1 The Inspection Procedure

The inspection for clearance around structures requires the use of some special techniques. However, there are also basic techniques that can be used for most statutory fire prevention inspections.

6.2 Time of Day

The time of day that premise inspections are conducted will vary with the type of premises. Any time after 8:00 a.m. may be fine for inspections of business establishments or recreational camp inspections. Inspection of dwellings, both permanent and seasonal, usually requires the inspection to be made after 10:00 a.m. If inspections are conducted before this time, the inspector may encounter some resistance or ill feeling especially by summer homeowners who usually like to sleep late. The same will apply to rural-dwelling occupants on weekends.

6.3 Approaching the Property

When driving onto the property to be inspected, give attention to the general surrounding of the buildings and their exposures to other buildings. Also, observe the general construction, type, occupancy, and general condition of the buildings. These observations will be of assistance during the inspection and will be of value should a fire occur or threaten the property.

Approach:
- Drive up slowly.
- Leave gates as found.
- Avoid raising dust.

For Personal Safety:
- Note threatening signs.
- Evidence of dogs.
- Evidence of illegal activity.

Observe:
- The grade/condition of the **road** and **accessibility** of approach from the standpoint of hazard reduction and fire protection.
- The general surroundings of buildings and exposures to other structures and vegetation.
- The structures, mechanical equipment, etc., in relation to their use and exposure to hazardous fuels.

6.4 Initial Contact with Occupant

The inspector's first duty is to make contact with the property owner, or whoever is in charge of the premises. The inspector should:

- Inspector should be in official vehicle and uniform.
- Introduce him/herself and show identification.

- Establish communications, avoiding technical or slang language.
- Explain the purpose of the contact and present the idea that the inspection will help protect the property from wildfire.
- Create the idea you are there to help.
- Rather than immediately jumping into a discussion of fire prevention, try a few "icebreakers." This will put the contact on a friendlier basis.
- Obtain permission to inspect. Request that someone accompany the inspector. If permission to inspect is refused, withdraw as cordially as possible and immediately notify your supervisor.
- Offer to return at a later date if the present time is not appropriate or causes inconvenience.
- If resident is uncooperative, leave the property and notify your supervisor.

6.5 Understanding Fire Behavior

Provide the homeowner with a brief understanding of fire behavior. There are three factors that influence the way fire behaves:

Fuel

- How much fuel is around the home?
- Vegetation dead or alive is fuel, as is the house and deck.
- Trees and home – heavy fuels burn longer.
- Grass and shrubs – light/flashy.

Topography

- Fire travels fast when it is climbing a hill.
- Saddles in a ridge act like a chimney. Homes built here will take a wildfire full force directed at the homeowner's front door.

Wind

- Wind provides fire with more oxygen making flames more intense.
- In a firestorm, flames are so intense the fire makes its own wind.
- Burning embers will be carried in the wind and can easily land on the homeowner's property or roof.

7. DEFENSIBLE SPACE CONCEPT

Defensible space is the area within the perimeter of a parcel, development, neighborhood and community where basic wildland fire protection practices and measures are implemented, providing the key point of defense from an approaching wildfire or escaping structure fire.

Each and every resident and wildland user must understand the steps necessary to act in a fire-safe manner. Residents must accept the responsibility of self-protection by implementing the recommendations. Established and maintained **emergency vehicle access**, **emergency water reserves**, **street names** and **building identification**, and **fuel modification** measures characterize the defensible area. The CDF provides guidance to local jurisdictions, agencies, professionals and the public in implementing these measures.

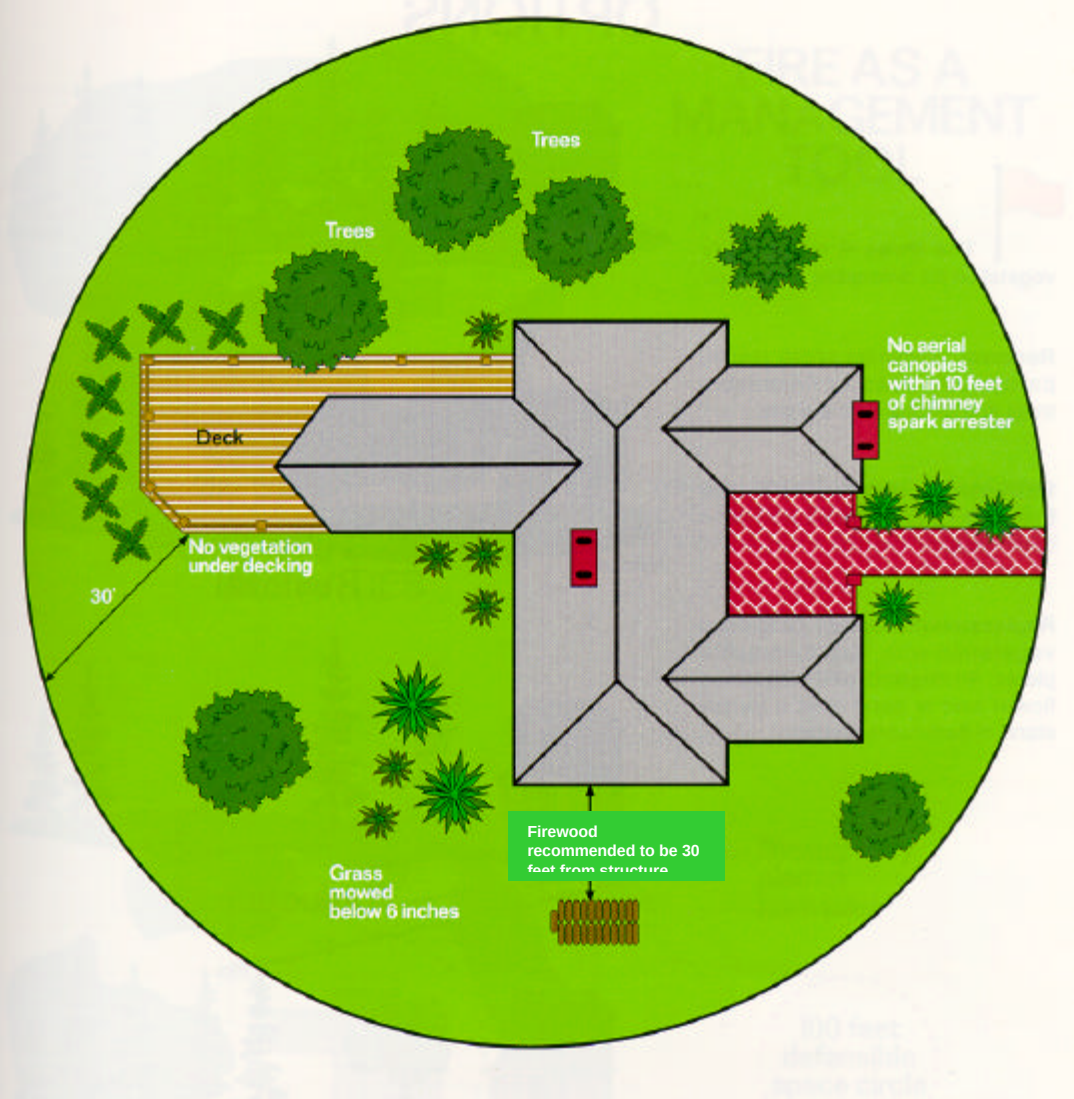


Figure 7.1.
Defensible Space Concept

8. FUEL MANAGEMENT FOR HOMEOWNERS

If homeowners practice a firewise style of living, homes and trees can survive a wildfire. The key to this is fuel reduction. If flammability can be managed, firefighters may have a chance to protect the homes and wildland. This is the key concept of defensible space and why California enacted **PRC 4291**. There are three methods that can assist homeowners in making their property more fire safe. They are Fuel Reduction, Total Fuel Removal, or Type Conversion.

8.1 Fuel Reduction

Fuel reduction, the partial removal of plants, can be accomplished in two ways. One is the removing of highly flammable species and saving the more fire resistive ones, which are then cleaned of dead material, thinned and pruned to reduce fuel volume. The alternative is removing a portion of all the plants to accomplish fuel reduction. Since there is less vegetation to burn, critical factors (i.e., flame length, fire intensity, and rate of fire spread) are reduced.

8.2 Fuel Removal

The requirement of fuel removal must be balanced with the need to prevent soil erosion, which is a threat every rainy season, especially on steep or erosive soils.

8.3 Type Conversion

This is actually a combination of methods: removing highly flammable plants and then replacing them with lower growing, less flammable species. The lower the height of the plant, the lower the height of the flame when it burns. This strategy is useful in areas adjacent to homes or in fuel breaks in communities.

Foresters refer to plants that are low growing and woody as low fuel volume plants. These plants are an excellent substitute for hazardous vegetation. Homeowners should position low fuel volume plants adjacent to the structures where the potential wildfire problem is most critical.

The type of vegetation and topography of an area determine the degree of needed management. Homeowners living next to highly flammable fuels often remove and replace them with lush green lawns and low fuel volume plants. Specimen trees or shrubs may be kept as long as this vegetation would not readily transmit a fire from native growth to structures. Periodic maintenance on these trees and shrubs provides adequate fire safety.

Each region of the country has different climates and soils that dictate vegetation management strategies. You will need to qualify choices for your area. Some landscape professionals as well as state and federal agencies have plant lists for specific regions or locales. The fire service should monitor these recommendations and suggest more resistive plants whenever necessary. A well thought-out plant list is important. Homeowners and developers may turn to the fire service for professional advice. The University of California Forest Products Laboratory has a listing of fire resistive vegetation available on their website, http://www.prefire.ucfpl.ucop.edu/.

9. ACCESS FOR EMERGENCY EQUIPMENT

9.1 Access Routes

Each home should have at least one entrance and one different exit for uninhibited access by emergency personnel and equipment (California Code of Regulations (**CCR**) **1273**).

Photograph 9.1.
Inappropriate Access Route

9.2 Road and Address Visibility

Each home needs a clearly marked address, which can be easily seen from either direction on the traveled roadway (**CCR 1274**). Homeowners should check on county ordinances to ensure they have the correct size.

Photograph 9.2.
Address

9.3 Dead End Roads

Dead end roads that end in cul-de-sacs should have a minimum turnaround capable of accommodating emergency fire equipment AND private traffic (**CCR 1273.09**).

Photograph 9.3.
Turnaround

9.4 Bridges

Bridges leading in and out of the residence or community should be capable of handling emergency response vehicles (**CCR 1273.07a**).

9.5 Emergency Evacuation Routes

Plan emergency evacuation routes for you and your family before a wildland fire occurs.

10. VEGETATION MANAGEMENT

10.1 Vegetation Clearance Around the Structure

The clearance of flammable vegetation around buildings has proven to be one of the most effective factors in surviving wildfire. It provides for defensible space, increased safety and working room for firefighters, reduced chance of direct flame contact, and reduced intensity of radiated heat from the approaching wildfire.

The 30-foot clearance should include:

- Well irrigated grass, which is an excellent firebreak;
- Removal of downed and woody litter;
- Choosing low-growing plants spaced apart so they do not touch;
- Not placing plants directly against the home as they act as a wick.

10.2 Vegetation Clearance 30-100' Plus

30-100 feet of clearance may be required because of extra-hazardous conditions (PRC 4291).

Within 30 feet of structure and beyond, up to 100 feet or more, provide a buffer from wildfire by thinning vegetation. Homes on slopes can be especially vulnerable. By limiting the vegetation, the home has a good chance to survive a wildfire. Get rid of ladder fuels by performing the following measures:

- Prune branches at least 15 feet up.
- Trees should be thinned so crowns do not touch.
- Break up continuous patches of brush. Leave a few scattered on the property for erosion control and aesthetics.
- Be sure to remove all dead brush, dead and down logs, and materials that could contribute to a "spotting bed," a location where an ember could land and provide a fuel source to start a wildfire.

Photograph 10.1.
House Showing Defensible Space

10.3 Community Fuel Breaks

A fuel break is recommended around all dwellings for increased protection over and above that level of protection provided by clearance only (**PRC 4290**).

10.4 Characteristics of Fire Resistive Vegetation

All plants will burn under extreme fire weather conditions such as drought. However, plants burn at different intensities and rates of consumption. Fire resistive plants burn with relatively low intensity, slow rates of spread, and with short flame lengths. The University of California Forest Products Laboratory has a listing of fire resistive vegetation available on their website, http://www.prefire.ucfpl.ucop.edu/. The following are characteristics of fire resistive vegetation:

- Growth with little or no accumulation of dead vegetation (either on the ground or standing upright)
- Non-resinous plants (willow, poplar or tulip trees)
- Low volume of total vegetation (for example, grass area as opposed to a forest of shrub-covered land)
- Plants with high live fuel moisture (plants that contain a large amount of water in comparison to their dry weight)
- Drought tolerant plants (deeply rooted plants with thick heavy leaves)

- Stands without ladder fuels (plants without small fine branches and limbs between the ground and the canopy of overtopping shrubs and trees)
- Plants requiring little maintenance (slow growing plants which, when maintained require little care)
- Plants with woody stems and branches that require prolonged heating to ignite.

11. FIREWISE CONSTRUCTION

11.1 Roofs

While inspecting the roof, consider the following:

- Free of leaves, needles, and other dead vegetation?
- Type, construction, condition, overhead wires?
- Height and condition of surrounding buildings (exposures)?
- Chimney screens and clearance?
- Sprinkler system-tanks, valves, and pressure?
- Drainage gutters clean?
- Dead wood removed from overhanging trees?

11.1a Clean Roof Surfaces and Gutters

Clean regularly to avoid accumulation of flammable materials (**PRC 4291**).

Photograph 11.1.
A Clean, Well-Maintained Class A Roof

11.1b Remove Limbs

Remove the portion of any tree that extends within 10 feet of the outlet of any chimney or stovepipe (PRC 4291).

11.1c Spark Arresters

Provide and maintain a screen over the outlet of every chimney or stovepipe. The screen should be constructed of nonflammable material and have openings of not more than ½" (PRC 4291).

Photograph 11.2.
Chimney/Stovepipes with Spark Arresters

11.1d Noncombustible Construction Material

The roof and the exterior structure of all dwellings should be constructed of noncombustible or fire resistant materials such as asphalt roofing shingles, tile or slate, brick or stone, aluminum, or sheet iron.

Photograph 11.3.
Noncombustible Roof

11.1e Fire Retardant Chemicals

Fire retardant chemicals should be used to treat highly combustible materials such as wood siding, cedar shakes, and exterior wood paneling. These treatments should be reapplied per the manufacturer's instructions to maintain their effectiveness over time.

11.1f Fire Ratings for Roofs

Pursuant to **HSC 13132.7**, fire retardant roofing is now required in the entire state of California for all new structures and all existing structures for any repair or replacement. Additionally, if 50% or more of a roof covering is replaced within any one-year period, the entire roof covering shall be replaced with fire retardant roofing as required by state and/or local regulations.

Test methods have been developed to evaluate the fire hazards of roof coverings. NFPA 256, *Methods of Fire Tests of Roof Coverings*, describes the appropriate procedures. The test evaluates the flammability of the roof covering, the protection it provides to a combustible roof deck, and the potential for producing flaming brands. Roof materials are classified as Class A, Class B, and Class C. To receive one of the classifications, the roof covering is given a series of fire tests of varying degree of severity. After all roof-covering tests have been conducted, roof coverings are classified based upon test results:

- Class A covering is one that is effective against a severe fire exposure, affords a high degree of fire protection to the roof deck, does not slip from position, and does not present a flying brand hazard.

This type of roof covering is required in all SRA and LRA areas classified as Very High fire hazard severity areas.

- A Class B roof covering is one that is effective against a moderate fire exposure, affords a moderate degree of fire protection to the roof deck, does not slip from position, and does not present a flying brand hazard. This type of roof covering is required in all SRA areas rated as Moderate fire hazard severity areas.
- A Class C covering is effective against light test exposure, provides a light degree of fire protection to the roof deck, does not slip from position, and does not present a flying brand hazard. This type of roof covering contains the lowest degree of fire resistance allowed in the state of California.

The specific definition of each roofing classification is dependent upon the roofing material, roofing support construction and sheathing. With a given surface material, the classification may change, depending on whether the sheathing is solid (plywood) or lath, and whether the underlay material is foil, tar paper or felt (different weights available). The Class A rating provides the most fire resistive characteristics.

11.2 Walls

Educate homeowners on the various types of siding available–nonflammable material for exterior walls is preferred. Some siding such as vinyl will soften and melt even under mild, radiant heat conditions. Materials such as stucco and masonry stand up better to heat and fire exposure. Wood walls are the most dangerous so it is important homeowners pay close attention to managing their vegetation around the structure.

11.3 Windows

Regular plate glass windows can thermally fracture due to heat from nearby fire even though the heat may not be enough to ignite the home's exterior wood. Advise homeowners that tempered glass or double pane windows tend to fare better during wildfires. Advise on the potential for plastic skylights to melt under intense heat.

11.4 Vents and Eaves

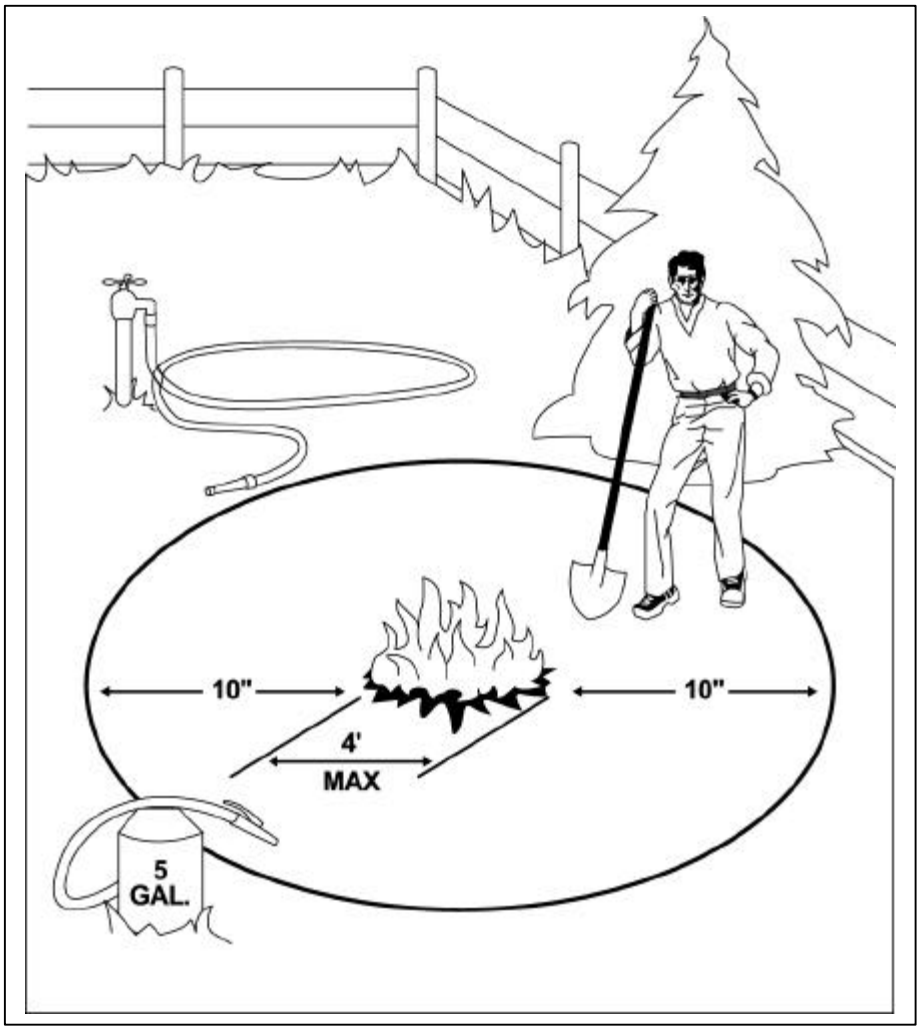
By enclosing your eaves you can prevent another method of flame entry and spread. Cover all vents with ¼ inch wire mesh screen to prevent sparks from being drawn into your home by air currents.

12. FIRE SOURCES

12.1 Debris Burning Regulations

Obtain the required permit prior to any burning on your property and abide by the terms of the burning permit (**PRC 4423** and **4433**).

Always cut a firebreak between recreational fires on your property and the adjacent dry forest fuels, 10 feet recommended (**PRC 4427a**).



Debris Burn Pile
Figure 12.1.

12.1a Permit Required

Make sure the property owner or the person in control of the property has a valid permit prior to any type of burning activity. A permit issued by CDF will not be valid for any day on which burning is prohibited by the local Air Pollution Control Board. Burning permits are required under PRC 4423.

12.1b Local Laws

Check local laws on burning of debris. Some communities allow burning only during specified hours of the day; others forbid it entirely. Check the local laws on specific types of material, which can legally be burned. In many cases, outside burning is limited to natural vegetation or untreated lumber. DO NOT BURN TIRES, TAR PAPER OR PESTICIDE CONTAINERS.

12.1c Check the Weather

Do not burn on hot, dry, or windy days. Even though it may be a legal burn day, use common sense.

12.1d Debris Burning

Debris to be burned should be in 4' x 4' piles, in a cleared area, away from overhead branches, with an adult in attendance at all times - consider the alternatives. Sometimes leaves, grass, and stubble may be of more value if they are not burned!

Incinerators should be in a cleared distance. **PRC 4446** states that the following minimum requirements shall apply:

- The area within 10 feet of the exterior of the incinerator is maintained free and clear of all flammable material and vegetation.
- A screen constructed of a nonflammable material, with no greater than ¼ inch mesh, or metal doors, close or cover each opening in the exterior of an incinerator to prevent the escape of flames, sparks, ashes or other burning material which might cause an uncontrolled fire.
- A permit is obtained prior to burning for the use of the incinerator pursuant to PRC 4423 and all other applicable provisions of law.

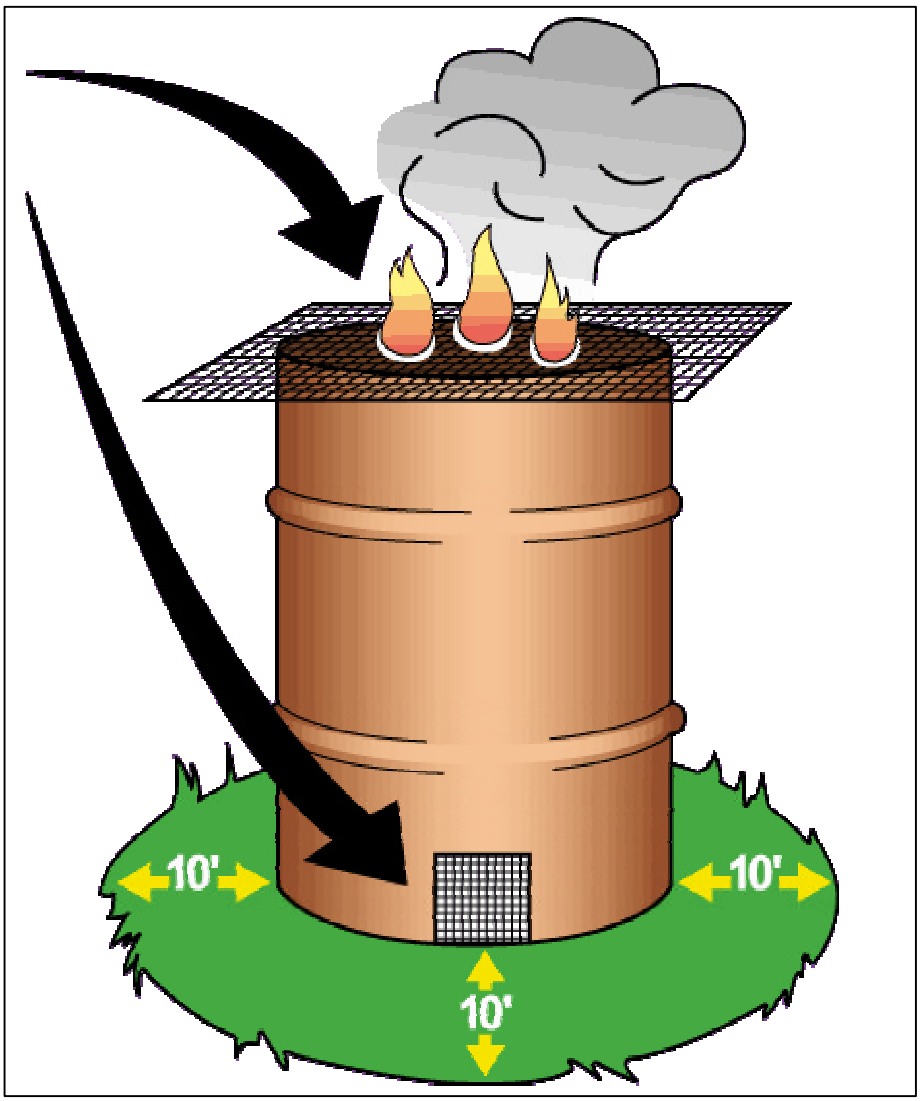


Figure 12.2.
Requirements for Incinerator

12.2 Campfire Safety

Campfire permits are not required for homeowners on their own property. Homeowners should practice fire safety though, as they are liable if a fire escapes.

- ✓ Always clear at least 5 feet in all directions around the fire pit.
- ✓ Always completely extinguish the fire before departing (**PRC 4432**).
  - Drown the fire with water while mixing the ashes and embers with soil.
  - Feel the ashes to make sure they are out.

12.3 Disposal of Ashes

Be especially careful when cooking outdoors. Charcoal briquettes and fireplace ashes should be extinguished by dumping into a metal pail and soaking with water. Charcoal briquettes can hold heat 24 hours if left unextinguished.

12.4 Gasoline Lanterns, Stoves and Heaters

Gasoline lanterns, stoves and heaters should be allowed to cool off prior to filling. Then place them on the ground in a cleared area and fill with the proper fuel.

12.5 Gasoline Storage

Store all flammable liquids in approved safety containers.

12.6 Liquefied Petroleum Gas (LPG)

LPG tanks (propane and butane) should be located at least 30 feet from any structure and surrounded with 10 feet of clearance.

12.7 Firewood Storage

Do not stack flammable materials, such as firewood, next to or against structures. Stack and cover woodpiles a recommended distance of at least 30 feet from all structures and clear away flammable vegetation within 10 feet of woodpiles.

Photograph 12.3.
Improper Placement of Firewood

12.8 Exhaust System Requirements

Be sure legal spark arresters are attached permanently to all internal combustion engines which could be operated off the road near flammable dry vegetation. Examples of internal combustion engines requiring spark arresters would be: lawnmowers, chainsaws, generators, motorcycles, off-highway vehicles, agricultural equipment, and many types of construction equipment (**PRC 4442**).

Consult the manufacturers guide for proper maintenance procedures and intervals. If it is not known if the spark arrester is the proper type, consult the spark arrester guide at the local fire prevention office.

Advise homeowners on the dangers of metal cutting blades and exhaust systems on their lawnmowers and weed eaters. Metal cutting blades on lawnmowers are a hazard. On hot, low-humidity, summer afternoons, if the metal blades strike rocks while mowing, the sparks will ignite the dry grass. Grass cutting activities utilizing mowers with metal cutting blades should be confined to the morning hours.

12.9 Welding Safety

Welding should be done in an area with ten feet of clearance of all flammable vegetation and the appropriate firefighting tools--round point shovel with an overall length not less than 46” and one backpack pump water-type fire extinguisher (**PRC 4427**).

13. BE PREPARED IN CASE OF WILDFIRE

13.1 Water Supply

Have an adequate or reliable water supply available in case of wildfires. For example, storage tanks, swimming pool, creeks or lakes can be utilized quickly with preplanning (**CCR 1275**).

Photograph 13.1.
Alternate Water Supply

13.2 Portable Water Pumps

Have a portable gasoline-powered water pump available with suction hose and enough fire hose to effectively reach around structures.

13.3 Swimming Pools

These are excellent sources of water for fire protection, when access is provided for emergency equipment to utilize the water.

Photograph 13.2.
Swimming Pool

13.4 Garden Hoses

Garden hose outlets should be located on the exterior of all dwellings with enough hose available to protect all sides of the dwelling and its roof.

13.5 Fire Tools

Have a cache of fire tools readily available including: ladder, extra garden hose, shovel, rake, buckets, etc.

13.6 Extra Protection

Pre-cut plywood window and sliding glass door coverings can provide increased protection. Nail them in place when a wildfire threatens.

13.7 Know the Danger Signs

- ✓ Prolonged dry weather.
- ✓ Plants and grass drying out.
- ✓ Cold weather that may speed up drying of vegetation.
- ✓ Drought year – limited rainfall and snow pack.
- ✓ Windy conditions.
- ✓ Thunderstorms.

Know what valuables you will take with you in case you are evacuated. Post the list in a visible location as a reference.

14. WHEN WILDFIRE APPROACHES

Photograph 14.1.
Approaching Wildfire

14.1 Close Windows and Doors

Close windows and doors to the house including garage doors and all doors inside the house. Take down drapes and curtains to prevent combustion from radiant heat. Turn on all lights so your house is visible in heavy smoke.

14.2 Water

Charge pre-positioned hose lines for use in combating the fire.

14.3 Wet Roof

If the roof is combustible, wet it down or, if equipped, turn on roof sprinklers.

14.4 Turn Off Gas

Turn off the gas at the meter and the propane at the tank.

14.5 Listen to Radio

Keep the radio tuned to local stations for timely reports on the fire's status and for evacuation directions.

14.6 Safety

If told to evacuate, leave the area as directed. If the fire cannot be stopped and passes over your home before you and your family evacuate, the safest place for your protection is inside the house with all the doors closed.

15. CLOSING THE INSPECTION

15.1 Explaining Hazards and Violations to the Occupant

Explain all hazardous conditions observed by the tour of inspection in a businesslike but friendly manner. Also clearly explain any observed fire law violation. Make an effort to get the occupant involved in the solution for corrective action. Very often the occupant will offer a solution exceeding the terms that the inspector may be preparing to request. If the occupant has an unreasonable solution or is at a loss for a solution, assume the roll of an advisor and offer suggestions. In this manner the inspector can work out a satisfactory and practical solution to the problem. This has definite advantages: the owner/occupant who is allowed to work out the problem is not only going to feel more satisfied but also is quite likely to be proud of the job. Be constantly on guard to make sure that suggestions are both reasonable and practical. The inspector has not completed the inspection responsibility until every known fire hazard and risk observed on the premises has been pointed out to the inspectee.

Photograph 15.1.
Hazardous Conditions

15.2 Documenting the Inspection

Note all fire law violations and observed hazards and risks on the Interagency Fire Hazard Inspection Notice (LE-38a – **Appendix B**) and set a reasonable, but definite time limit for compliance. The more critical the fire weather situation, the more urgent compliance becomes. Also record other observed hazards and risks.

15.3 Closeo
15.4 ut with Homeowner

When you and the inspectee have concluded the inspection, it is important to cover the following points:

- Thank the inspectee for his/her time.
- Be sure to leave the owner/occupant the inspectee's copy of the Interagency Fire Hazard Inspection Notice (LE-38a or R5 5100-209).
- The portion of the inspection notice, which describes how to contact you, is important information to leave with the inspectee.
- Provide fire prevention educational handouts for homeowners.
- Are there any questions concerning the inspection you can answer?
- Leave the property slowly.
- Leave the property exactly the way you found it.

15.4 Follow-Up/Reinspection

Reinspection is the next major step to gaining compliance. If the inspector makes a commitment to return at a particular time or date, make every effort to keep the appointment. A follow-up system is absolutely necessary to make premises inspections effective. Frequent reinspections should be made if existing hazards or risks warrant them. They may require only a short visit but will assist in keeping things in good order and at minimum fire risk.